



Department of Energy

Richland Operations Office
P.O. Box 550
Richland, Washington 99352

0042423

022769

NOV 08 1995

Ms. Donna L. Powauke, Manager
Environmental Restoration/
Waste Management Program
Nez Perce Tribe
P. O. Box 365
Lapwai, Idaho 83540-0365



Dear Ms. Powauke:

RESONANTSONIC DRILLING ON THE HANFORD SITE

The U.S. Department of Energy, Richland Operations Office (RL), appreciates the Nez Perce Tribe Environmental Restoration and Waste Management (ERWM) interest in environmental restoration activities. Significant focus has been placed on well drilling in support of groundwater remediation. The Nez Perce ERWM interest in the technologies used for cleanup challenges Hanford to continue to identify the best technologies for site remediation.

Hanford's use of ResonantSonic drilling was discussed at the October 17, 1995, meeting of the Plume Focus Area Subgroup (PFA). Fiscal Year (FY) 1996 Cooperative Research and Development Agreement (CRADA) activities with the Water Development Corporation will focus on trying to resolve concerns identified during FY 1995 well drilling activities. Specific focus will be placed on evaluating the pipe failure encountered while drilling well 299W-15-31, determining the near borehole effects, and representativeness and quality of samples obtained from sonic drilling. The work scope associated with these efforts has not been finalized, but a status of the CRADA activities will be provided at the PFA subgroup meetings.

The July 25, 1995, Nez Perce ERWM letter requested a list of wells drilled using the ResonantSonic technique, driller logs, and costs. A list of the wells drilled during FY 1995 is attached. The well drilling logs requested in the Nez Perce ERWM July letter can be obtained from the project files. The well numbers for the 200-ZP-1 wells are 299W-15-29, 299W-15-30, 299W-15-31, and 299W-15-31A. The FY 1996 budget for the 200-ZP-1 Operable Unit has allocated an average of \$200,000 for each 350-foot well. Approximately 70% of the cost is for the drilling and materials required for completion of the well; and 30% is allocated for engineering, geologic, hydrologic, and analytical support required to install the well. FY 1995 costs are not as clearly separated, but should be comparable with those referenced above.

022769

Ms. Donna L. Powaukee

-2-

NOV 08 1995

The letter also requested a clarification from Mr. McLellan regarding compaction of the surrounding soil resulting from drilling of wells by either air rotary or cable tool methods. Mr. McLellan stated that other wells have experienced reduced flow rates and some of these were drilled using methods other than ResonantSonic. All drilling methods can create compaction in a borehole to varying degrees. Some low producing wells have occurred over a long period of time, and some more recently have occurred in ResonantSonic and cable tool drilled wells. As a result, well design is being evaluated, and field evaluations will provide a better understanding of which well designs are more suitable for various geologies at the Hanford Site.

The Nez Perce ERWM identified concern that some of the CRADA reports were not available for public release. With respect to the CRADA results, the CRADA law was enacted by Congress in 1989, and does include language that data considered proprietary by either CRADA party be designated as "CRADA Protected." RL concurs with Water Development Hanford, Inc.'s position that the information is business sensitive.

I hope this helps to alleviate some of the Nez Perce ERWM concerns. If additional information is needed, however, please feel free to contact Ms. Donna Wanek, of my staff, on (509) 376-5778.

Sincerely,



Linda K. McClain, Assistant Manager
for Environmental Restoration

GWP:DMW

Attachment

cc w/attach:

T. Brouns, Lab

M. Buckmaster, ERC

D. Faulk, EPA

D. Goswami, Ecology

K. Koegler, ERC

S. Leja, Ecology

G. McLellan, Water Development Hanford, Inc.

cc w/o attach:

H. Rueben, NPT

022769

OPERABLE UNIT	WELL NUMBER	TYPE	METHOD
200-ZP-1	299-W15-29	INJECTION	VADOSE ZONE - AIR ROTARY SATURATED ZONE - SONIC
200-ZP-1	299-W15-30	EXTRACTION	VADOSE ZONE - AIR ROTARY SATURATED ZONE - SONIC
200-ZP-1	299-W15-31	EXTRACTION *NOTE - WELL ABANDONED	VADOSE ZONE - AIR ROTARY SATURATED ZONE - SONIC
200-ZP-1	299-W15-31A	EXTRACTION	VADOSE ZONE - AIR ROTARY SATURATED ZONE - SONIC
200-ZP-1	299-W15-32	MONITORING (DNAPL)	VADOSE ZONE - CABLE TOOL SATURATED ZONE - SONIC
200-UP-1	299-W19-28	INJECTION	VADOSE ZONE - AIR ROTARY SATURATED ZONE - CABLE TOOL
200-UP-1	299-W19-39	EXTRACTION	VADOSE ZONE - AIR ROTARY SATURATED ZONE - CABLE TOOL
200-UP-1	299-W19-37	MONITORING	VADOSE ZONE - AIR ROTARY SATURATED ZONE - SONIC
200-UP-1	299-W19-38	MONITORING	VADOSE ZONE - AIR ROTARY SATURATED ZONE - SONIC
200-UP-1	299-W19-40	MONITORING	VADOSE ZONE - AIR ROTARY SATURATED ZONE - SONIC